REMARKS

The Applicants thank Assistant Examiner Bello and Primary Examiner Negash for their time and consideration given during the personal interview conducted on February 19, 2003. This preliminary amendment is being submitted in connection with this interview. Consideration of the present application is respectfully requested in light of the above amendments to the application and in view of the following remarks. Claims 1-52 have been rejected. Upon entry of this amendment, Claims 1-52 remain pending in this application. The independent claims for this application are Claims 1, 21, 24, and 41.

Attached hereto is a marked-up version of the changes made to the claims by the current amendment. The attached page is captioned "Version with markings to show changes made."

Rejections under 35 U.S.C. §§ 102 and 103

The Examiner has rejected Claims 1, 2, 5, 11, 12, 14, 15, 18-21, 24, 26, 27, 31-33, 35, 37, 39-41, 45-48, 51 and 52 under 35 U.S.C. § 102(e) as being anticipated by Pangrac (U.S. Patent Application Publication No. 2001/0030785). The Examiner has also rejected Claims 3, 4, 7-10, 13, 17, 23, 25, 29, 30, 34, 36, 43-44, 49 and 50 under 35 U.S.C. § 103(a) as being unpatentable over Pangrac.

The Examiner has also rejected Claims 6, 28, and 42 under 35 U.S.C. § 103(a) as being unpatentable over Pangrac in view of U.S. Patent No. 4,975,899 to Faulkner. In, addition, the Examiner has rejected Claims 13 and 38 under 35 U.S.C. § 103(a) as being unpatentable over Pangrac in view of U.S. Patent No. 5,880,864 to Williams. The Examiner has also rejected Claims 16 and 22 under 35 U.S.C. § 103(a) as being unpatentable over Pangrac in view of U.S. Patent No. 6,356,369 to Farhan.

These rejections are respectfully traversed.

Independent Claims 1 and 21

The rejections of Claims 1 and 21 are respectfully traversed. It is respectfully submitted that the Pangrac, Faulkner, Williams, and Farhan references fail to describe, teach, or

suggest the recitations enumerated in amended independent Claims 1 and 21. Specifically, these references fail to describe, teach, or suggest the combination of (1) an optical tap for dividing a downstream optical signal between one or more subscribers of the optical network system; (2) a subscriber optical interface connected to the optical tap for receiving the downstream optical signal from, and sending upstream optical signals, to the at least one optical tap; (3) a laser transceiver node for communicating optical signals **to and from** the data service hub and **to and from** the optical tap; and (4) a laser transceiver node for apportioning bandwidth that is shared between groups of subscribers connected to a respective optical tap of the optical network system.

Figure 4 of the Pangrac Reference

The Pangrac reference provides a teaching of a "more" optical system **400** in Figure 4. Like the hybrid fiber/coax systems described before it, the optical system **400** of Pangrac does not share bandwidth among gateways **139**. Instead, each gateway **139** is assigned a particular optical wavelength or channel. See Pangrac, paragraph 93, second and third sentences.

In other words, the point of distribution **103** does not provide any teaching for apportioning bandwidth that is shared between groups of subscribers connected to a respective optical tap of the optical network system, as recited in amended independent Claims 1 and 21. Instead, the wavelength division multiplexer/demultiplexer **405** propagates individual wavelengths to respective gateways **139** along separate optical fibers **437**. Further, the point of distribution **103** does not communicate optical signals with the data service hub **101**. Instead, the point of distribution **103** communicates electrical signals to the data service hub **101**. And therefore, the point of distribution **103** does not communicate optical signals **to and from** the data service hub and **to and from** the optical tap

In light of the differences noted above and the differences discussed during the personal interview, one of ordinary skill in the art recognizes that the aforementioned references cannot anticipate nor render obvious the recitations as set forth in amended independent Claims 1 and 21. Accordingly, reconsideration and withdrawal of these rejections are respectfully requested.

Independent Claim 24

The rejection of Claim 24 is respectfully traversed. It is respectfully submitted that the Pangrac, Faulkner, Williams, and Farhan references fail to describe, teach, or suggest the recitations enumerated in independent Claim 24. Specifically, these references fail to describe, teach, or suggest a method for communicating optical signals from a data service provider to at least one subscriber comprising the steps of (1) propagating downstream optical signals at a single wavelength from the data service provider; (2) receiving the single wavelength downstream optical signals in a laser transceiver node from the service provider; (3) dividing the downstream signals between pre-assigned multiplexers in the laser transceiver node; (4) apportioning bandwidth between subscribers in the laser transceiver node; (5) multiplexing the downstream signals at the pre-assigned multiplexers; and (6) propagating respective combined downstream optical signals at a single wavelength to at least one subscriber via at least one optical tap along at least one optical waveguide, as recited in independent Claim 24.

As noted above, the Pangrac reference does not divide downstream signals between pre-assigned multiplexers in the point of distribution 103. Further, the Pangrac reference does not multiplex downstream signals at the pre-assigned multiplexers. Instead, the Pangrac, et al. reference assigns each subscriber a different and specific individual frequency or a specific individual wavelength.

In light of these differences and the differences discussed during the personal interview, one of ordinary skill in the art recognizes that the aforementioned references cannot anticipate nor render obvious the recitations as set forth in independent Claim 24. Accordingly, reconsideration and withdrawal of this rejection are respectfully requested.

Independent Claim 41

The rejection of independent Claim 41 is respectfully traversed. It is respectfully submitted that the Pangrac, Faulkner, Williams, and Farhan references fail to describe, teach, or suggest the recitations enumerated in independent Claim 41. Specifically, these references fail to describe, teach, or suggest a method for communicating optical signals from at least one subscriber to a data service provider comprising the combination of (1) converting upstream

optical signals to electrical signals at the laser transceiver node; (2) combining upstream electrical signals in the laser transceiver node; (3) apportioning bandwidth for at least one subscriber in the laser transceiver node; (4) converting the combined upstream electrical signals into optical signals; and (5) propagating the combined upstream optical signals to the data service provider along an optical waveguide, as recited in independent Claim 41.

As noted above, the point of distribution 103 of the Pangrac reference does not transmit optical signals to the data service hub 101. Instead, the point of distribution 103 transmits electrical signals to its data service hub 101. Therefore, the point of distribution 103 does not convert combined upstream electrical signals into optical signals.

The Applicants have not amended Claim 41 in connection with the interview because it was the steps/functionality enumerated in this claim that were discussed during the interview.

In light of the differences mentioned above and the differences discussed during the personal interview, one of ordinary skill in the art recognizes that the aforementioned references cannot anticipate nor render obvious the recitations as set forth in independent Claim 41. Accordingly, reconsideration and withdrawal of this rejection are respectfully requested.

Dependent Claims 2-20, 22-23, 25-40, and 42-52

The Applicants respectfully submit that the above identified dependent claims are allowable because each of their respective independent claims are patentable over the cited references. The Applicants also respectfully submit that the recitations of these dependent claims are of patentable significance.

In view of the foregoing, the Applicants respectfully request that the Examiner withdraw the pending rejections of Claims 2-20, 22-23, 25-40, and 42-52.

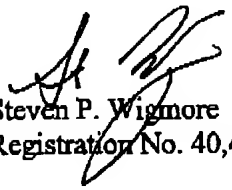
Conclusion

The Applicants and the undersigned again thank Examiners Bello and Negash for their time and consideration given during the personal interview conducted on February 19, 2003. The Applicants and the undersigned also thank Examiner Bello for his consideration of

these remarks. The Applicants respectfully submit that the present application is in condition for allowance. Such action is hereby courteously solicited.

If the Examiner believes that there are any issues that can be resolved by telephone conference, or that there are any formalities that can be corrected by an Examiner's amendment, the Examiner is urged to contact the undersigned in the Atlanta Metropolitan area at (404) 572-2884.

Respectfully submitted,



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VERSION WITH MARKINGS TO SHOW CHANGES MADE

1. (Twice Amended) An optical network system comprising:

a data service hub;

at least one optical tap for dividing a downstream optical signal between one or more subscribers of the optical network system;

at least one subscriber optical interface connected to the optical tap for receiving the downstream optical signal from and sending upstream optical signals to the at least one optical tap;

a laser transceiver node disposed between the data service hub and the optical tap, for communicating optical signals [between] to and from the data service hub and to and from the optical tap, and for apportioning bandwidth that is shared between groups of subscribers connected to a respective optical tap of the optical network system, and

one or more optical waveguides connected between respective optical taps and the laser transceiver node, for carrying the upstream optical signals and the downstream optical signals, whereby the number of the waveguides is minimized while optical bandwidth for subscribers is controllable by the laser transceiver node in response to subscriber demand use.

21. (Twice Amended) An optical network system comprising:

a data service hub;

at least one optical tap for dividing a downstream optical signal between one or more subscribers of the optical network system;

at least one subscriber optical interface connected to the optical tap for receiving the downstream optical signal from and sending upstream optical signals to the at least one optical tap;

a laser transceiver node disposed between the data service hub and the at least one subscriber optical interface, for communicating optical signals [between] to and from the data service hub and to and from the optical tap, and for apportioning bandwidth that is shared between groups of subscribers connected to a respective optical tap of the optical network system, at least one optical tap being disposed within the laser transceiver node, and

one or more optical waveguides connected between respective optical taps and the laser transceiver node, for carrying the upstream optical signals and the downstream optical signals, whereby the number of the waveguides is minimized while optical bandwidth for subscribers is controllable by the laser transceiver node in response to subscriber demand.

24. (Once Amended) A method for communicating optical signals from a data service provider to at least one subscriber comprising the steps of:

propagating downstream optical signals at a single wavelength from the data service provider;

receiving the single wavelength downstream optical signals in a laser transceiver node from the data service provider;

dividing the downstream signals between preassigned multiplexers in the laser transceiver node;

apportioning bandwidth between subscribers in the laser transceiver node;

multiplexing the downstream signals at the preassigned multiplexers; and

propagating respective combined downstream optical signals at a single wavelength to at least one subscriber via at least one optical tap along at least one optical waveguide.

36. (Once Amended) The method of claim 24, [wherein the] further comprising a step of converting downstream [electrical] signals [further comprises] by modulating at least one of Fabry-Perot lasers, distributed feedback lasers, and vertical cavity surface emitting lasers (VCSELs) to generate downstream optical signals.

38. (Once Amended) The method of claim 24, wherein the step of dividing the downstream [electrical] signals further comprises the substep of using a time division multiplex protocol to divide the downstream [electrical] signals between preassigned multiplexers.